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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,513	08/31/2000	Leon L. Shaw	97-1681-P	4468

23413 7590 01/02/2003

CANTOR COLBURN, LLP
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EXAMINER
HENDRICKSON, STUART L

ART UNIT	PAPER NUMBER
1754	14

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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T.D

Office Action Summary	Application No. 652593	Applicant(s) Shaw
	Examiner Weldrick	Group Art Unit 1754

—The MAILING DATE of this communication appears on th cover sheet beneath th correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 7/5, 9/9/02.

☒ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-27 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-27 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Stat m nt(s), PTO-1449, Paper No(s). 11

☐ Int rvi w Summary, PTO-413

☐ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Pat nt Applicati n, PTO-152

☐ Notice of Draftsperson's Pat nt Drawing Review, PTO-948

☐ Oth r _____

Office Action Summary

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-41 of U.S. Patent No. 6214309. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims encompass the milling conditions patented.

Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) In claims 1, 4, 9, 16, and 23, 'high energy' is subjective and unclear.

B) In claims 3 and 24, 'mixture' is meant- combination implies a chemical combination.

C) In claims 8, 14 and 23, 'nanostructured' is unclear as to whether crystallite size is meant.

D) In claim 9, 'precursor' (of carbon) should be deleted. 'Source' appears intended.

Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. taken with Crawford et al.

Lee teaches in col.3-4 and 6 mixing pitch and silica, grinding and forming a carbide. While not teaching 'high energy' milling, Lee teaches small carbon pellets. Thus intense, energetic, grinding is suggested. Crawford teaches in column 5 milling to make small particles.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the milling of Crawford in the process of Lee because doing so makes the small particles desired.

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. taken with Crawford et al. as applied to claims 1, 2 and 4-7 above, and further in view of Kurachi. The above does not teach the carbon sources, but Kurachi does in column 5. Using them in the process of Lee is an obvious expedient to provide the carbon source required by Lee.

Claims 1-5, 7-14, 16-21 and 23-26 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dunmead et al. '803.

Dunmead teaches in column 7 and ex. 1 ball-milling carbon black and metal oxide. If another material is meant in claim 9, a milling media is present, as may be cobalt oxide. The mix is heated in Ar to form carbide. While not explicitly teaching 'high energy', the 50 rpm recited appears to be 'high'. In any event, using the claimed milling is an obvious expedient to make fine particle size for more efficient reaction (col. 5 middle).

Claims 1, 2, 4, 8-10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by El-Eskandarany et al. in Metallurgical and Materials Trans.

The reference teaches on pg. 4210 high energy milling carbon, W oxide and an extra metal, then leaching/washing then annealing. N odifferences are seen in the product made. Claim 9 is met in that the W oxide is a precursor to WC recited in the claim.

Applicant's arguments filed 7/5/02 have been fully considered but they are not persuasive. The specification does not explicitly define nanostructured or 'high' energy. It appears to be applicants position that 'high energy' milling is old and known in the art. If so, this should be clearly stated. Websites are not preferred since they can change and have no 'date'. Differences between mixtures and chemical combinations are readily known to chemists. Lee grinds a powder mixture in a ball mill; how they prepare the resins is of no moment. Crawford need not teach a ball mill, as Lee does. Dunmead is applicable as it is not clear that the claims are limited to the milling conditions argued.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to examiner Hendrickson at telephone number (703) 308-2539.

Stuart Hendrickson
examiner Art Unit 1754